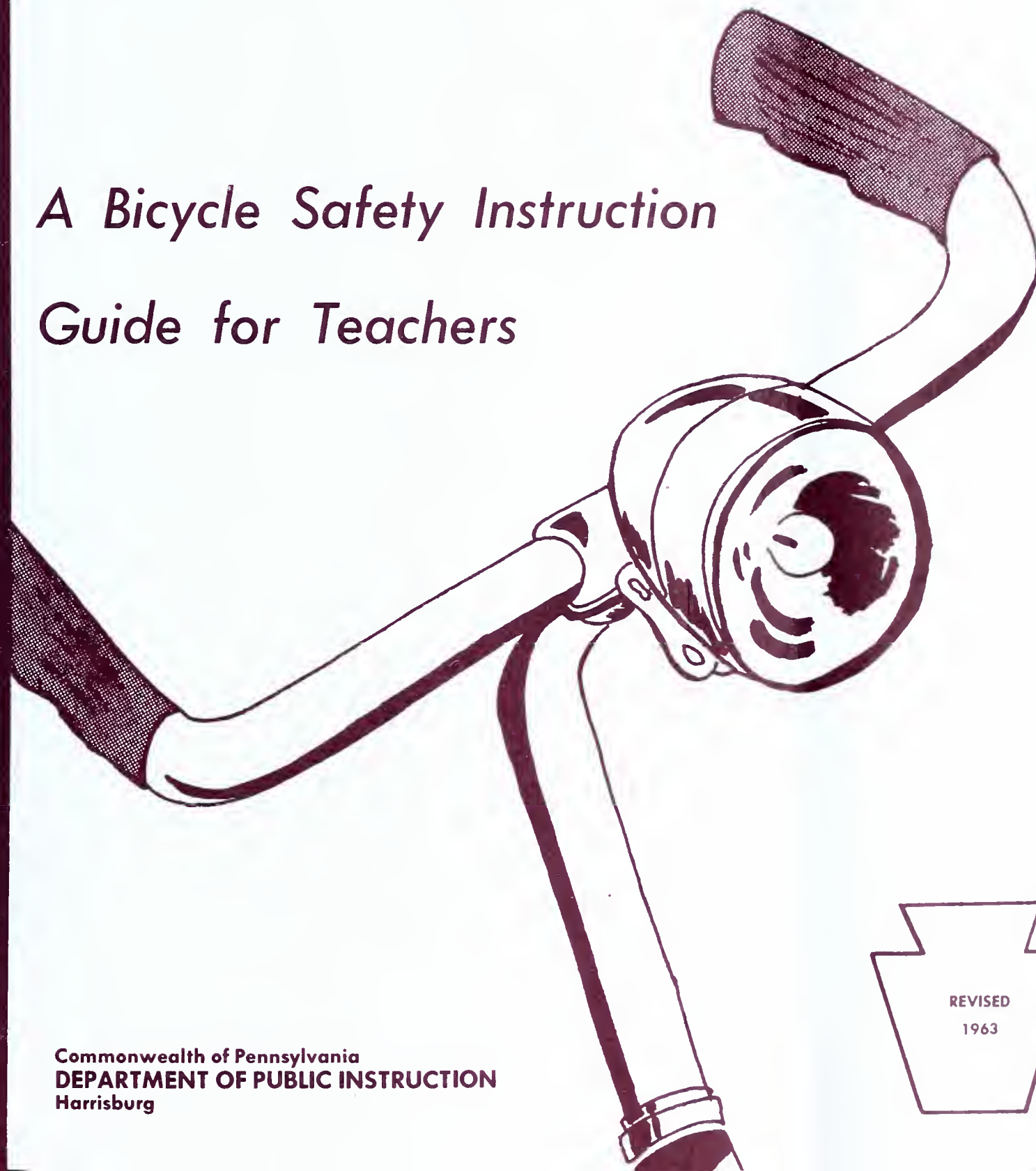


Bicycling

no. 394
C.2

A Bicycle Safety Instruction Guide for Teachers



Commonwealth of Pennsylvania
DEPARTMENT OF PUBLIC INSTRUCTION
Harrisburg

REVISED
1963

COMMONWEALTH OF PENNSYLVANIA

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Governor

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MESSAGE FROM THE SUPERINTENDENT OF PUBLIC INSTRUCTION

The development of the Jet Age with man on the brink of conquering space may be the most stimulating achievement in the history of civilization. Compared with this spectacular accomplishment the traffic and safety problems we face each day may seem simple to solve.

The fact is we have made less progress in traffic safety than in the more complex challenges of space and supersonic speed, to which we are presently dedicated.

We need the same kind of dedication in teaching people to walk and drive safely on our streets and highways. This includes bicycling, which remains an integral part of the traffic stream. Not only is the bicycle still the pride and joy of the school children of America, but it is a convenient mode of transportation and many times essential as a means of earning money.

Because current statistics indicate that the bicycle accident rate is increasing, this revised bicycle instruction guide has been prepared in the hope that it will stimulate bicycle safety education in the schools of the Commonwealth.

Charles H. Boehm

BICYCLING

A Bicycle Safety Instruction
Guide for Teachers



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INTRODUCTION

The Evolution of the Bicycle

Throughout the centuries inventive minds have discovered easier, faster, and more efficient methods of locomotion and transportation. One outcome of such efforts was the invention of the two-wheeled vehicle, known today as the bicycle.

The forerunner of the bicycle was the pedomotor, a two-wheeled vehicle propelled by the feet very much as the kiddie-car is ridden by a child today. It appears in Egyptian works of art, on the frescoes of Pompeii, and, much later, in the stained glass church window at Stoke Poges, England. The first practical pedomotor was made and used by Baron von Drais, a forester in Baden, Germany, in 1816. So valuable did he find it in covering his forest paths that the Draisine, or "celeripede" as he called it, became the foundation for later improvements.

MacMillan added levers in 1840. Another Scot, Dalzell, added the rear-drive in 1842, and then the "safety draisine" traveled 10 to 12 miles an hour. That the word "safety" was applied to this vehicle over 99 years ago leads us to believe that even the forerunner of the modern bicycle was recognized as a traffic hazard. In fact, MacMillan was once fined for "furious driving" in Scotland. Machaux in 1855 added cranks and front wheel pedals, and ten years later a blacksmith, Lallement, built the famous high wheel "bone-shaker," the velocipede that put cycling into the sports classification.

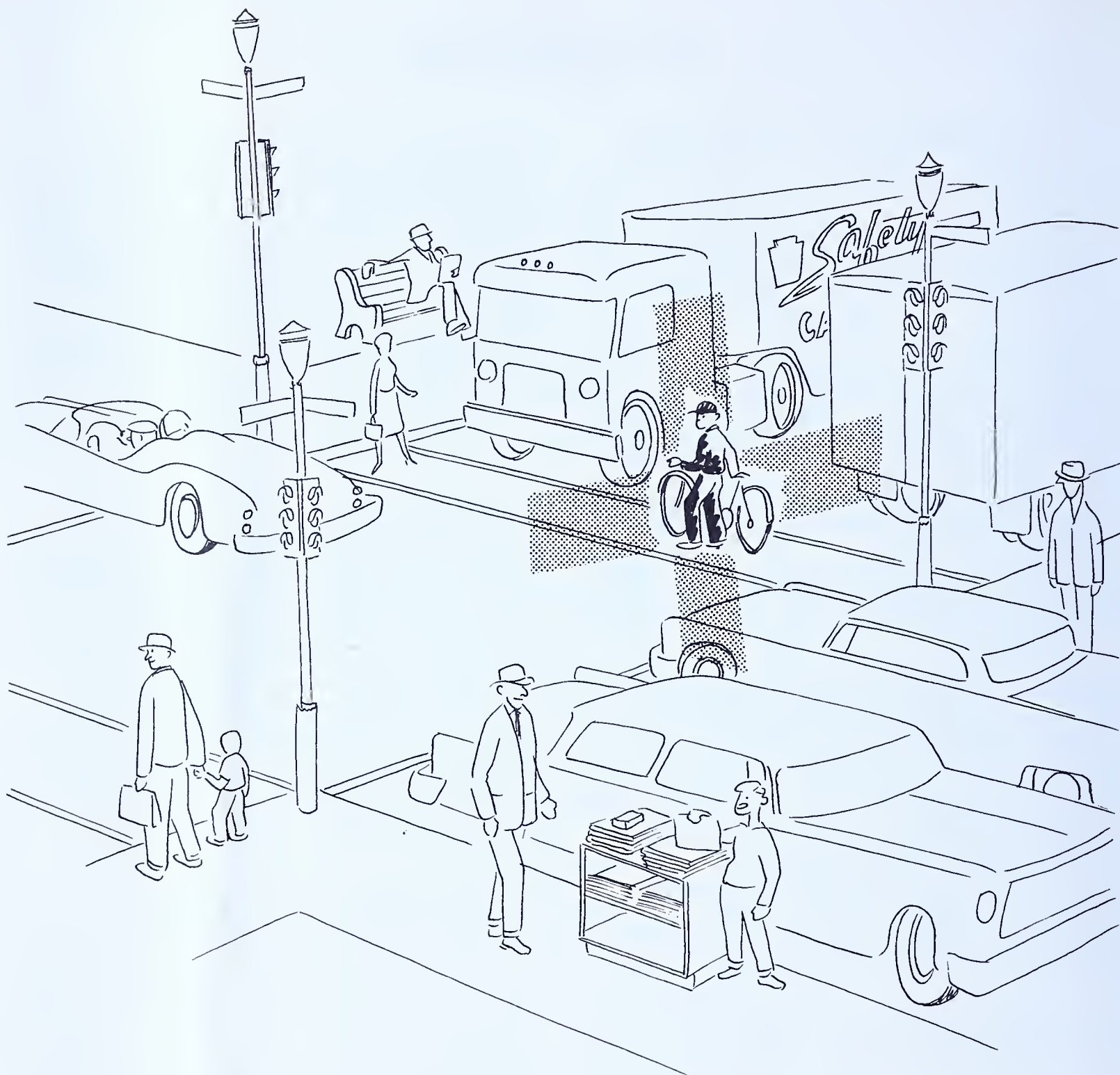
The Need for Bicycle Safety Education

The bicycle has become an accepted means of transportation between the home and school, or the home and place of business. It has many advantages; it gives pleasure to all classes and ages, and it provides an excellent form of exercise. In addition to keeping one physically fit, riding a bicycle helps keep one mentally alert. Undoubtedly, it is one of the most healthful and enjoyable of all sports.

The bicycle has the same rights on the highways as the automobile, but it must be remembered that along with the privileges granted to the cyclist by the Pennsylvania Vehicle Code, there are also definite obligations and rules which he must obey. Too much emphasis cannot be placed upon careful, considerate riding, observance of safe rules of riding, and strict observance of all traffic regulations and rules specifically covering bicycling. Lack of consideration for fellow-riders, pedestrians, or motorists brings condemnation upon all bicyclists.

The bicycle accident rate indicates the need for bicycle safety education. In full support of this need, statistics indicate that 80 percent of all bicycle riders involved in accidents were violating traffic laws. Required registration of each bicycle either by municipal or state governments would aid in emphasizing the privileges and responsibilities assumed by a bicycle rider. The full responsibility of preventing criticism of the bicyclist rests primarily upon the shoulders of parents and educators, since very few communities require bicycle registration or testing.

A study of the statistics of bicycle accidents indicates what phases of safety education must be stressed. Since over 75 percent of the deaths due to bicycle accidents occur among children five to fourteen years old, it is to this group that most attention should be paid. In view of parents' lack of organized approach to the subject, the responsibility for teaching bicycle safety lies with the school administrators and teachers. Dr. Thomas H. Briggs, one of America's outstanding teachers and philosophers, has stated as a guiding principle in the education process that, "The first duty of the school is to teach pupils to do better the desirable things that they are likely to do anyway, and to reveal higher activities and make them both desirable and, to a maximum extent, possible."

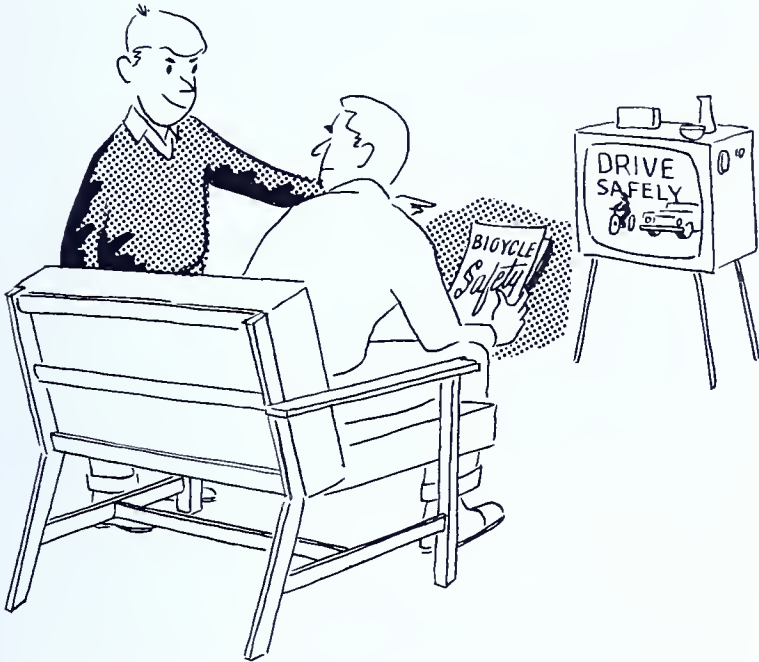


In Heavy Traffic Dismount, Walk Your Bicycle

THE BICYCLE SAFETY EDUCATION PROGRAM

The Parents' Responsibilities

Education begins in the home—there the parents are the teachers. It is the moral duty of the parents whose children own bicycles to teach them the proper use of that vehicle.



Parents Must Take an Interest in Safety

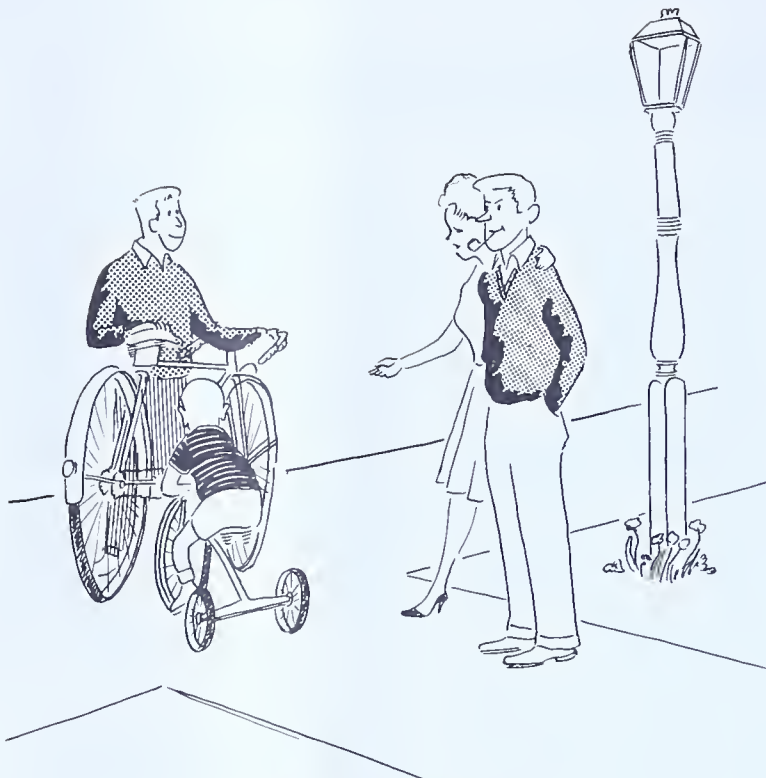
Doubtless, when parents provide a kiddie-car for their child, they spend some time in helping him to learn to operate and ride this toy, although the extent of travel is limited to the home and the sidewalk. As the child grows older, his successive vehicular toys are the tricycle, scooter, and unfortunately, the motorized go-cart. These toys have a wider range of use than the kiddie-car, but they too should be confined to the home and the sidewalk. Finally comes the bicycle, which may be a forerunner to operating and owning an automobile. Records show that, even though the cyclist assumes responsibilities equal to the motorists when operating on the streets and highways in dangerous traffic, parents exercise less care in assisting their youngster to master the operation of the bicycle than they did when he rode his kiddie-car.

The first specific responsibility resting upon the parents is the selection of a sturdy bicycle of proper size, equipped with the safety accessories prescribed by local ordinance or state law. They should not only insist that the bicycle be kept in good condition but also check its condition. Parents should recognize the importance of learning to ride a bicycle in a safe location where there is little chance of accidents with motor vehicles or pedestrians. Bicycle paths, playgrounds, even the backyard, are far safer locations for the novice rider than the roadway or sidewalk.

Parents must cooperate with the local city, school, and police officials in the enforcement of rules and regulations governing the operation of bicycles. Since the majority of bicycle accidents involve children and young adults, the influence of the home must play a greater part in the promotion of safety. Parents should give full support and encouragement to bicycle safety activities carried on by the schools, police departments, and other civic organizations. No municipal program of regulation and registration can be entirely successful without the support of the parents of bicycle riders, school authorities, and the public as a whole. Parents can do much in behalf of a municipal program by giving it full support.



Parents Must Cooperate With Local Authorities



Parents Discuss Responsibility

Restriction of riding privileges for youngsters who repeatedly disobey safety rules is one of the most effective means parents have of controlling the behavior of young cyclists. Parents should have a clear understanding with their children that infractions of the city ordinances or dangerous riding practices will mean that the bicycle must go into storage for a week or longer.

Finally, persistent and continued parental training of children to be courteous and safety-minded at all times will pay large dividends when their children become cyclists and later drivers of motor vehicles.

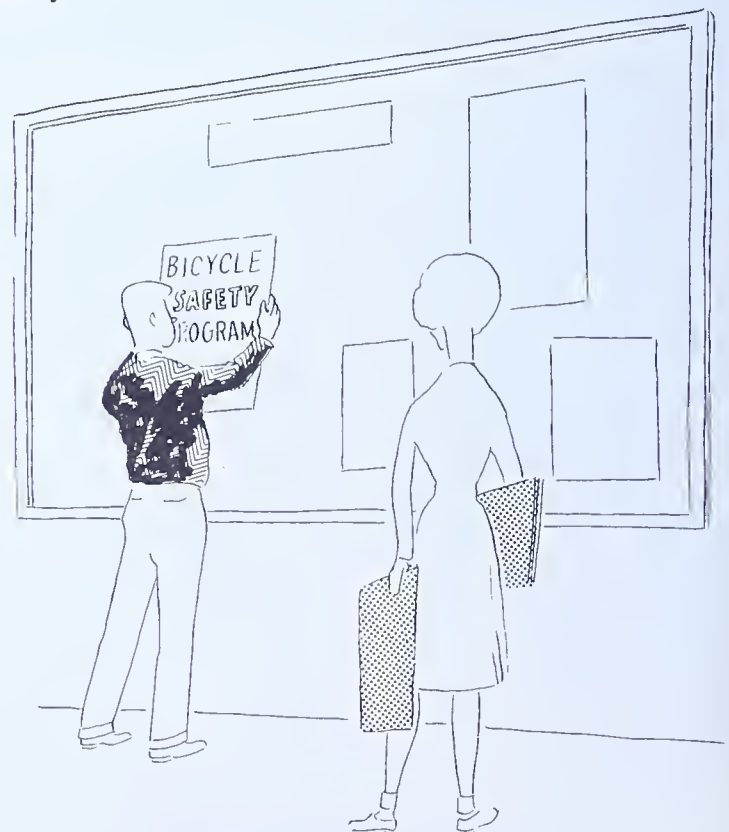
The School's Responsibilities

Of 25,000 annual bicycle accidents, 22,000 involve cyclists between the ages of five and fourteen since this is the period when the greatest number of boys and girls ride bicycles. If instruction in bicycle safety education is to be effective, it should not only precede the time at which children start to ride a bicycle, but should continue until they can operate the bicycle in a safe manner.

The school's greatest responsibility toward the problem of bicycle safety is to reduce the number of bicycle accidents without restricting the use of the bicycle for pleasure, sport, or business. Safe bicycling is the result of positive attitudes and well-developed habits and skills. The schools have a real opportunity to provide the learning situations for improved bicycling attitudes, skills, and habits, and thereby contribute to the reduction of bicycling accidents. Teaching safe bicycle practices is therefore a legitimate function of the schools.

Place of Bicycle Safety Education in the Curriculum

An organized safety program in the school's curriculum offers an excellent opportunity for a unit in bicycle safety. Since learning is a progressive process, the emphasis on bicycle safety should begin in the elementary grades of school. It should be approached through real life situations. In schools which do not have such a safety program, a unit may be set aside in the health and physical education program for such instruction. Assembly programs also offer excellent opportunities for emphasizing bicycle safety.



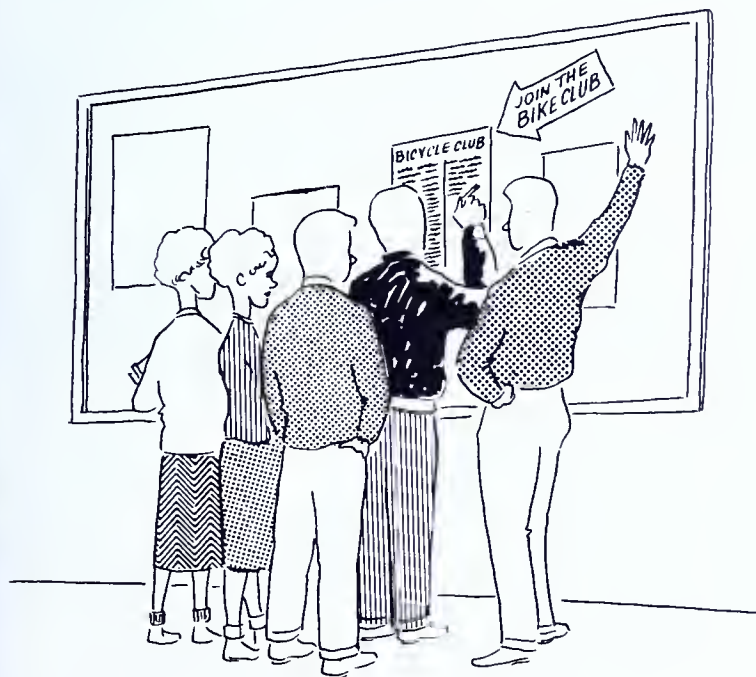
Change the Bulletin Board Often

The bicycle lends itself very well to units and projects in many subjects in the elementary and junior high school curriculum; for example, health and physical education, social studies, general science, and physics. In the automotive course, the problems of the motorist as well as those of the bicyclist can be studied, making for better understanding of common safety problems. In consumer education the selection, materials, types, care, and use of the bicycle may be studied. Mechanical drawing courses offer many related projects, including the drawing of a bicycle rack, detailed drawings of the bicycle or some of its parts. In the woodworking shop, students may make wooden racks, shipping crates, or carrier baskets; the machine shop offers equally good opportunities for projects on the bicycle.

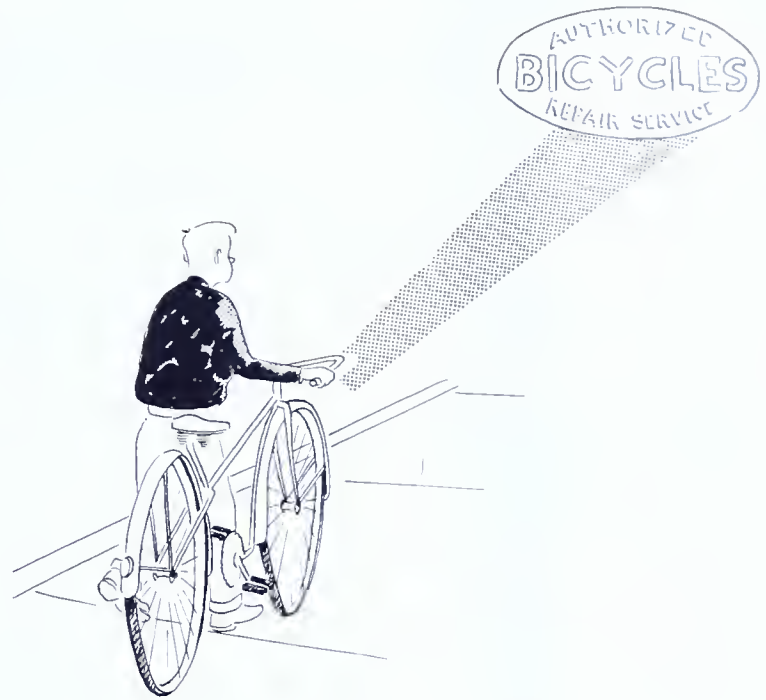
Cooperation of Local Organizations

Publicity goes far in making a program successful. The local radio and television stations and newspapers have excellent opportunities for cooperating in bicycle safety programs. Stores also may cooperate by displaying posters and by advertising.

Organizations such as the YMCA and the YWCA can offer courses in bicycle-riding. Such organizations can also form bicycle clubs. Local



Form Bicycle Clubs



Have Bike Check Once a Year

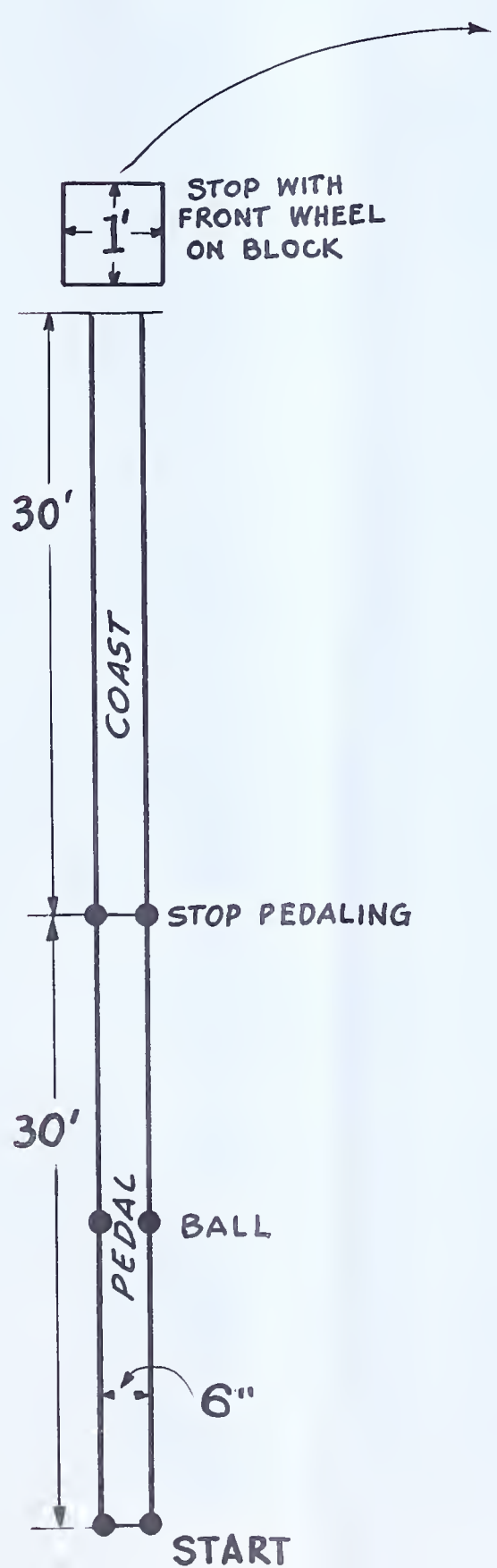
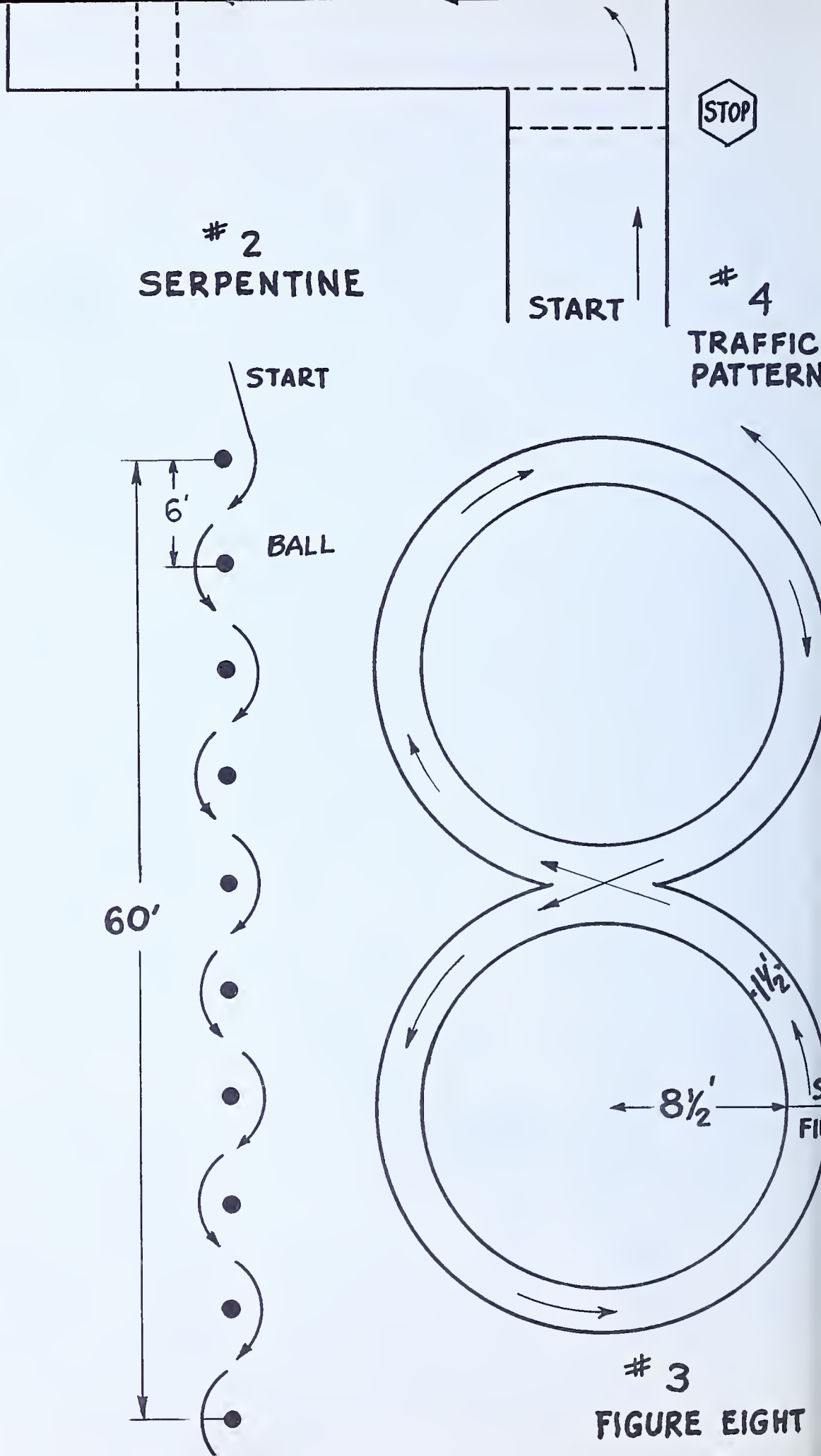
automobile clubs, service clubs, police departments, and safety councils render valuable assistance.

The Bicycle Club

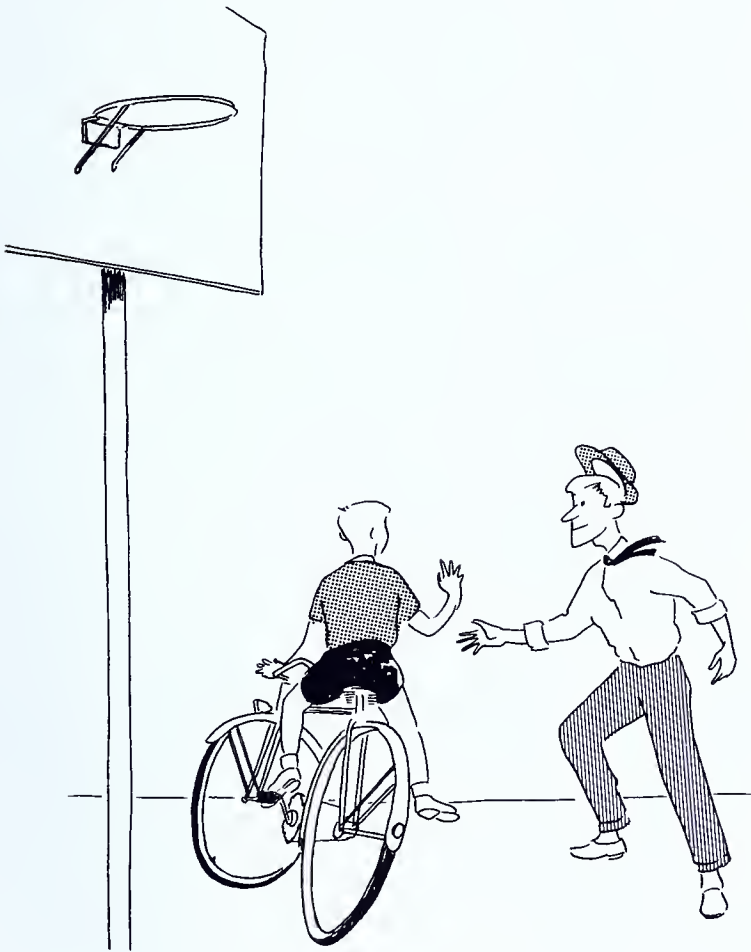
The formation of bicycle clubs is an excellent method of meeting the bicycle problem in the elementary grades and junior high school. Some secondary school authorities consider such clubs a more logical approach to the problem than classroom work since instruction can be limited to those students who are riding bicycles. At the same time these clubs provide healthful recreation through extracurricular activity.

The organization should be similar to other clubs in the school with provision for president, vice-president, secretary, and treasurer. A sympathetic faculty sponsor is essential for a successful club. The bylaws should be simple but well planned, and membership should be restricted to riders who have bicycles in good condition and who practice safety rules. Such careful selection of members will serve as an incentive for others to meet the qualifications. Other activities of successful clubs will resemble those mentioned in Unit VII, page 21 of this bulletin.

BICYCLE SKILL TEST LAYOUT



SELECTED UNITS IN BICYCLE SAFETY INSTRUCTION



The Learning Process

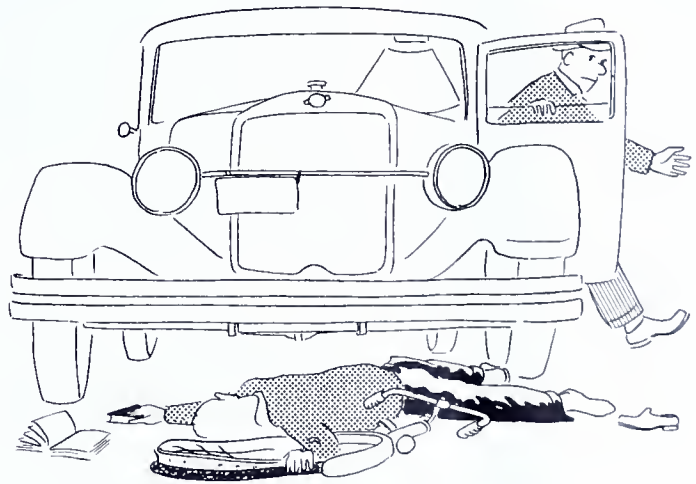
Whatever type of program is selected for instruction in bicycle safety, it should include as a minimum the topics for discussion and the activities described in the following pages of this bulletin.

UNIT I: The Accident Problem as It Relates to Bicycle Safety Education

Statistics represent an important step forward for those concerned with bicycle safety. Facts about bicycle accidents provide a good starting point for the bicycle safety programs. The types, locations, times of occurrence, rider violations and under-age groups involved are factors that may be determined from accident reports.

A. Gathering statistical evidence of the need for bicycle safety education

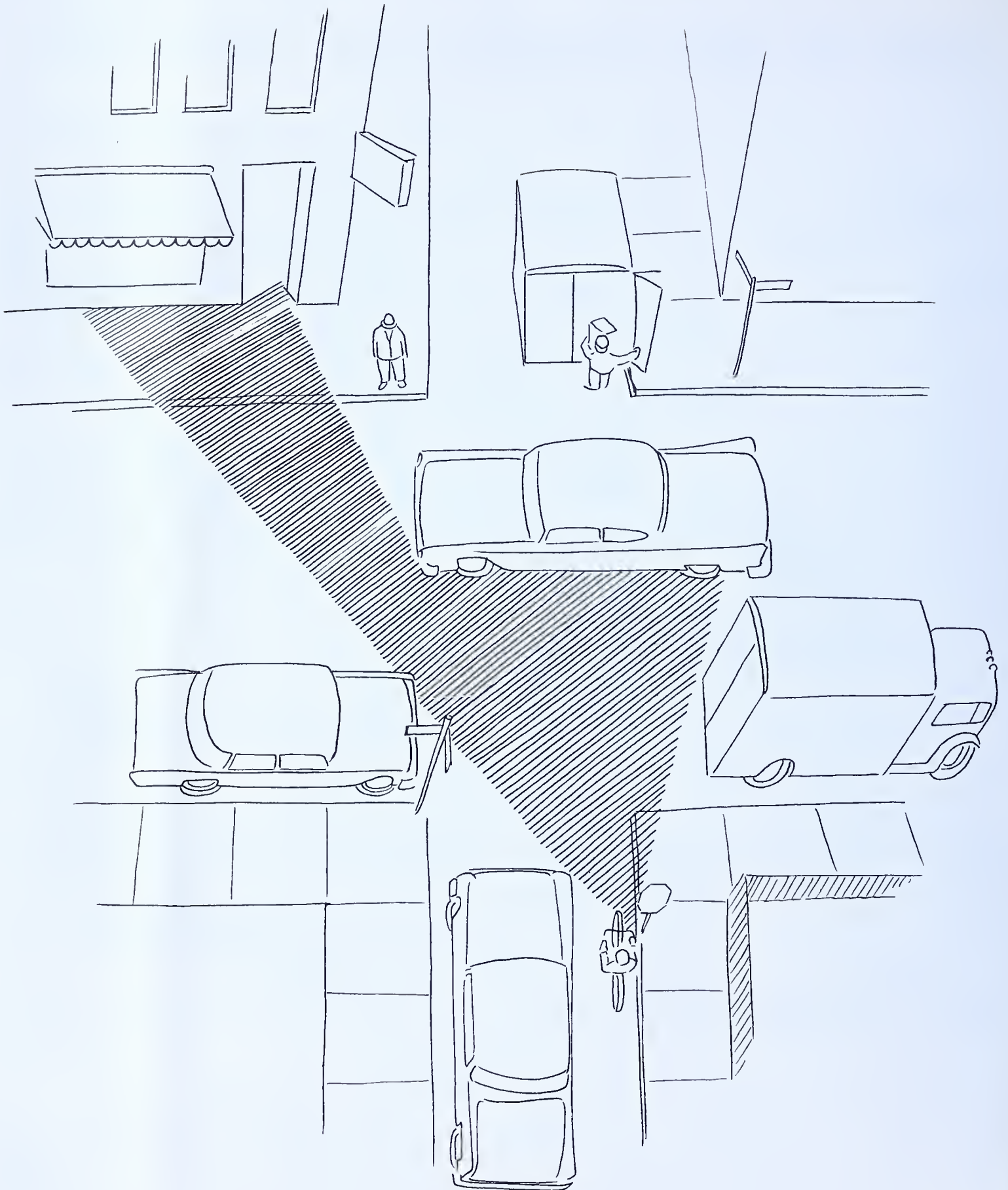
1. Statistics are important. They may be secured from local police, the Pennsylvania Department of Health, and the Pennsylvania Department of Revenue. National statistics are available through the National Safety Council and the Bicycle Institute of America, Inc.
2. Data required
 - a. Deaths and injuries by age groups
 - b. Sex of killed and injured
 - c. The causes of accidents
 - d. Comparison of city and rural accident records compared
 - e. Bicycle accident data as related to weather conditions, seasons of the year, day or days of the week, and the time of day



Carelessness May Result in This

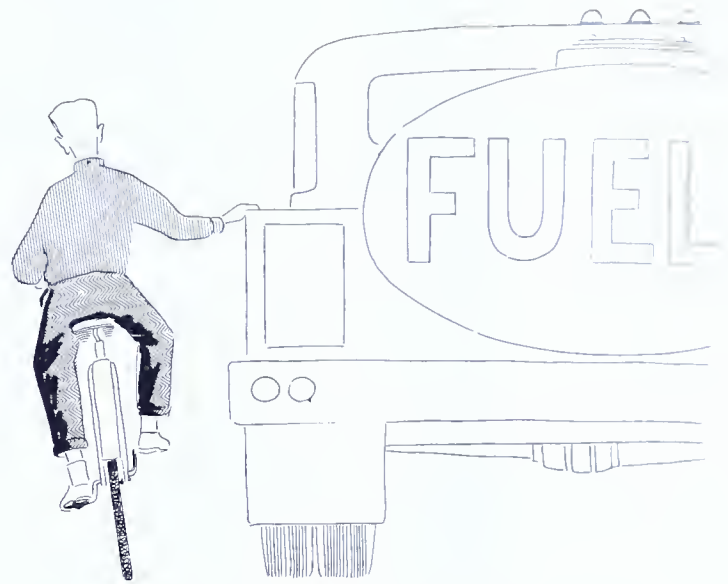
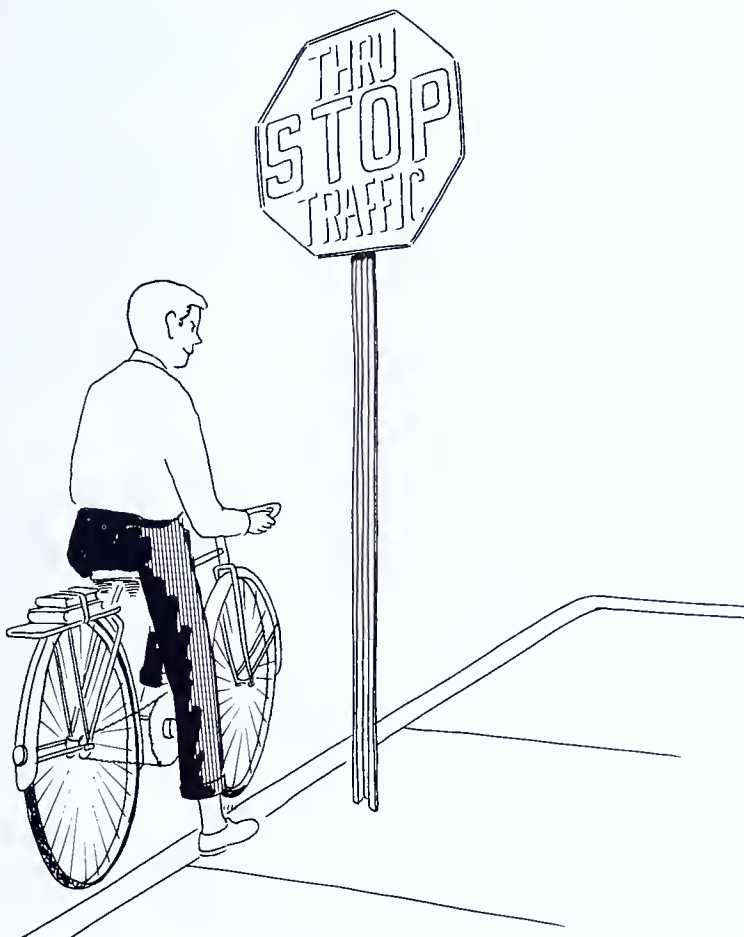
B. Factors in the problem

1. *Degree of exposure*—The exposure of riders to traffic accidents has increased because of the great rise in the number of bicycles in use and the corresponding increase in the amount of vehicular traffic on the streets and highways.



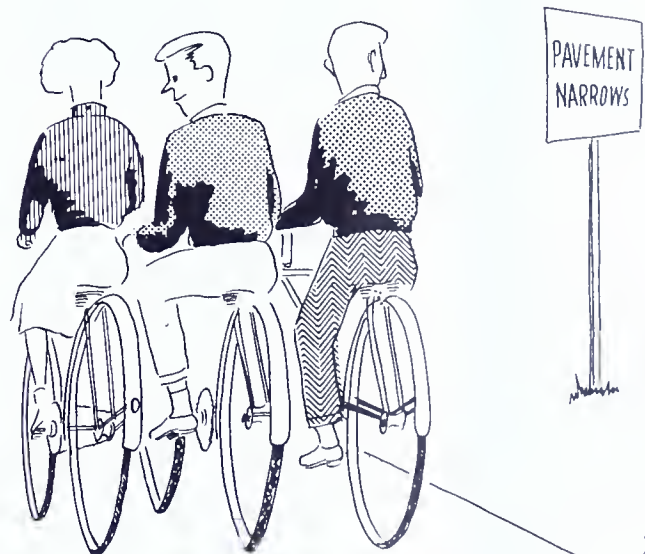
Stop, Look and Listen at Intersections

2. *Traffic conditions*—The number of streets with high vehicular speeds, the width of streets, distribution of traffic, and the degree of law obedience, are examples of conditions which affect the safety of bicycle riders as well as the safety of motorists and pedestrians.
3. *Condition of the bicycles*—Approximately one-fourth of the bicycles involved in accidents were found to be defective.
4. *Circumstances under which collisions occur*—Collisions between motor vehicles and bicycles occur
 - a. Seven out of ten during daylight hours
 - b. 44% at intersections in rural areas—
an even higher percentage in urban areas
 - c. Four out of five because of a violation on the part of the bicyclist
 - d. One out of four because of a violation on the part of the motor vehicle driver
 - e. When 95% of the motor vehicles are moving straight ahead



This Is Unlawful As Well As Dangerous

- C. *Most common traffic violations*—Frequently, cyclists commit traffic violations by
1. Not having right of way
 2. Improper turning
 3. Disregard of stop signs, signals
 4. Riding in center of street
 5. Riding against traffic
 6. Riding too fast
 7. Carrying extra rider
 8. Riding abreast of other rider
 9. Cutting in and out of traffic
 10. Following too closely

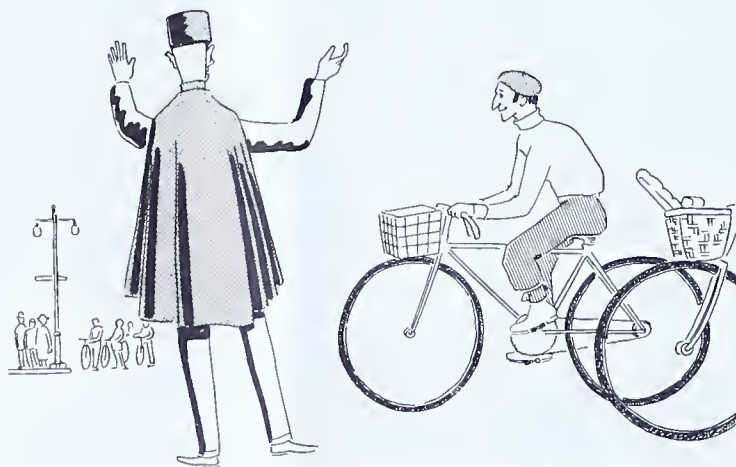


Never Ride Three Abreast

UNIT II: Use of the Bicycle

Traffic safety may be emphasized and reviewed from the point of view of the bicyclist. Good instruction in bicycle safety may also develop desirable attitudes toward pedestrians, automobile drivers and other bicycle riders.

- A. History of the development of the bicycle
- B. Study of the use of the bicycle for
 - 1. Pleasure: A value in attaining physical fitness; a means of recreation.
 - 2. Errands and part-time jobs.
 - 3. Transportation to and from school.
- C. Study of the use of the bicycle by different age groups
- D. Study of the use of the bicycle by boys; by girls
- E. Study of the use of the bicycle in different countries



Study Use of Bicycles in Other Countries

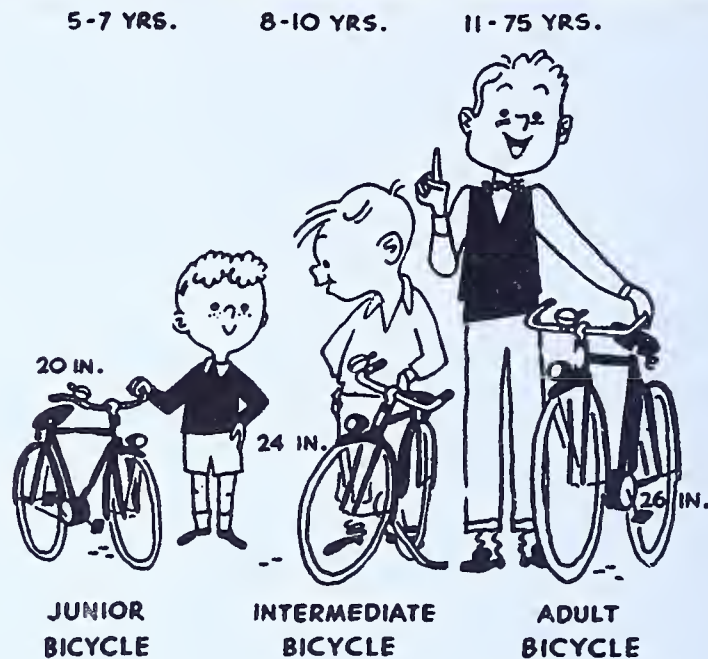
UNIT III: Selection of the Bicycle

Although in most instances the parents will help in selecting the child's bicycle, the rider himself should know what features to look for in a safe, efficient vehicle.

A. Size

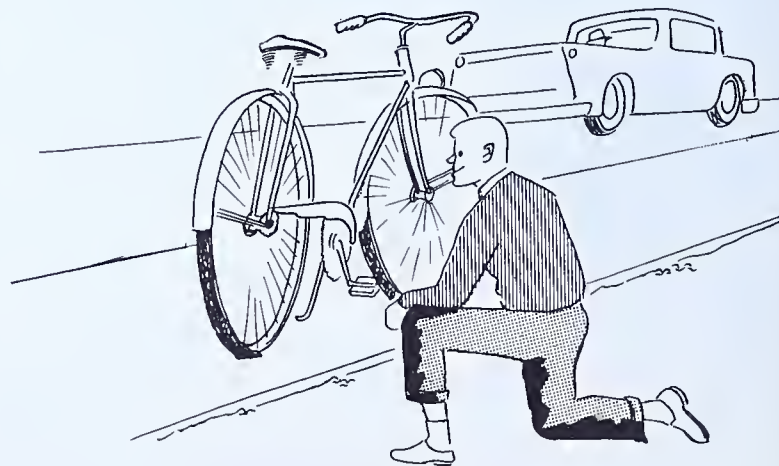
- 1. The importance of selecting a bicycle of proper size—neither too small nor too large to permit safe, efficient operation.

Right Size Bike Important For Safe and Comfortable Riding



2. Adjusting the bicycle

- a. Saddle—The saddle should be low enough to permit the foot to rest comfortably when the pedal is at the lowest point, so that the leg, thigh, and heel (shoe removed and foot on the low pedal) form a straight line. The saddle should be parallel to the ground.



Make Repairs Off the Highway

- b. Handlebars—The handlebars should be about the width of the rider's shoulders. The hands should drop naturally on the bars, a little in front of the body with the elbows only slightly bent. The upper part of the body should be inclined slightly forward.
- c. The handlebar grips should be slightly higher than the saddle and at right angles to the handlebar stem.
3. Gearing—The choice of gear, within certain limits, is a matter of opinion. A bicycle is geared so that the rear wheel will turn faster than the pedals. The gearing is found by dividing the number of teeth on the rear sprocket into the number on the front sprocket and multiplying by the diameter of the wheel in inches. The size of the gear means that a 72-gear bicycle, for example, will travel with each revolution of the pedals the same distance a 72" diameter wheel would travel in one revolution.

A higher gear requires more effort; a smaller gear is more active. Normal gears for men should be between 64 and 72; for women 56 and 64.

B. Construction

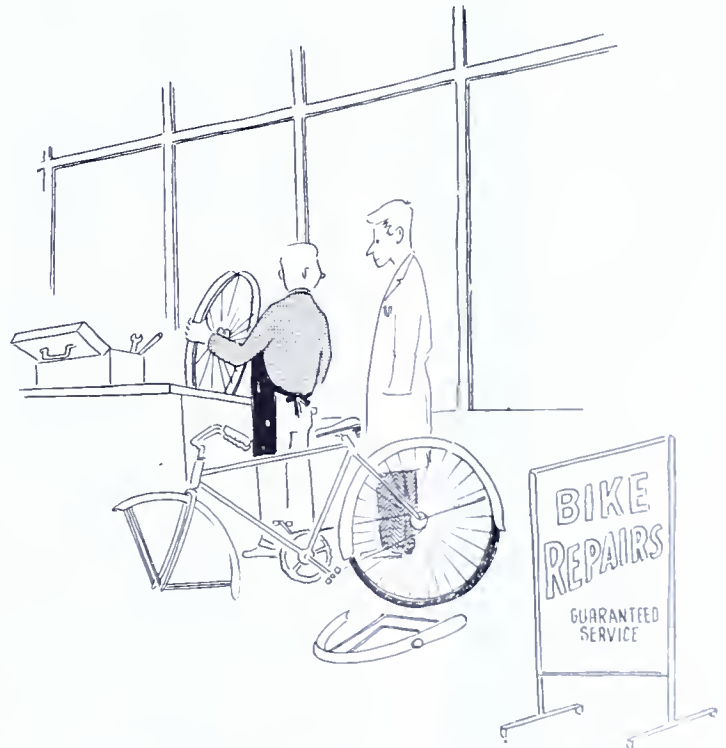
1. Frame—The frame must be sturdy and able to support the weight of the rider without danger of breaking or coming apart.
2. Spokes—Examine the wheels of the bicycle frequently to make sure that all the spokes are in the wheel and that they are properly tightened.
3. Brake—A coaster brake in good condition is essential for a safe vehicle. The brake should be powerful enough to make the braked wheels skid on dry, level, clean pavement.
4. Tires—The tires should be in good condition and have a good tread.

C. Required Accessories

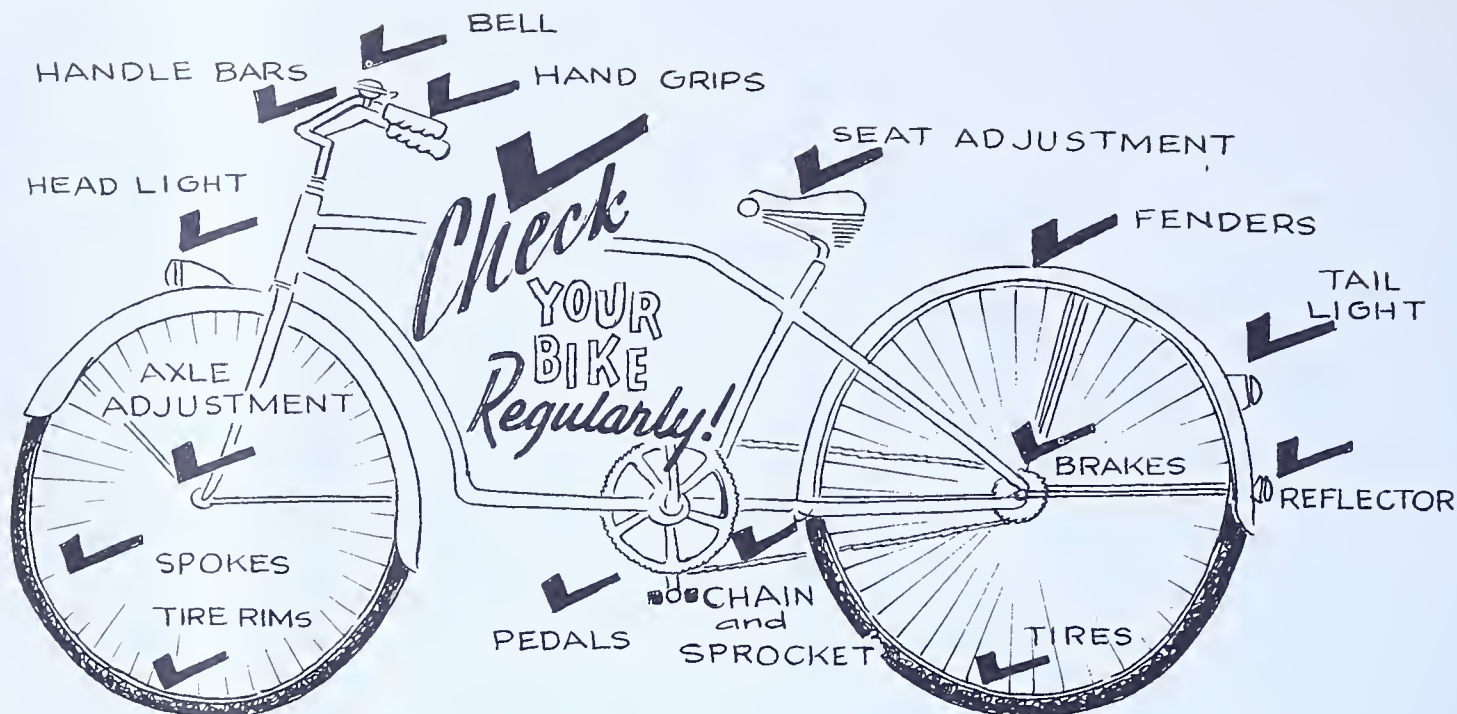
Local municipal or state laws require bicycles to be equipped with certain accessories to assure the safe operation of the vehicle.

1. Headlights—Headlights are required for night riding to illuminate the road for some distance ahead and to make the bicycle visible from a distance of at least 500 feet. See *Section 801* of the Vehicle Code Book.
2. Rear Reflectors—Rear reflectors are required for night riding; they must be at least 1 1/2 inches in diameter and so designed as to make them visible for a distance of at least 500 feet from the headlights of an approaching vehicle. The small "jewels" offer practically no protection and do not comply with Pennsylvania law which stipulates the red reflector or lamp shall be at least 1 1/2 inches in diameter.
3. Tail Light—A red tail light is recommended for the rear of a bicycle, providing it is equipped with a reflector lens and meets legal specifications.

D. Other Accessories Which Should Be Required: Horn or Bell—A warning device such as a horn or bell, capable of giving a signal audible for a distance of at least 100 feet, should be a required accessory for bicycles. Whistles or sirens are not acceptable for this purpose.



Learn To Know Your Bicycle—Make Minor Repairs



UNIT IV: Care and Maintenance of the Bicycle

If kept in good repair, the bicycle is designed to last for many years. Almost anyone can make minor bicycle repairs and adjustments, but major repairs should be done by a reliable serviceman. To help children with problems of bicycle maintenance, invite a reliable retailer to demonstrate what makes a bicycle durable, dependable, and safe.

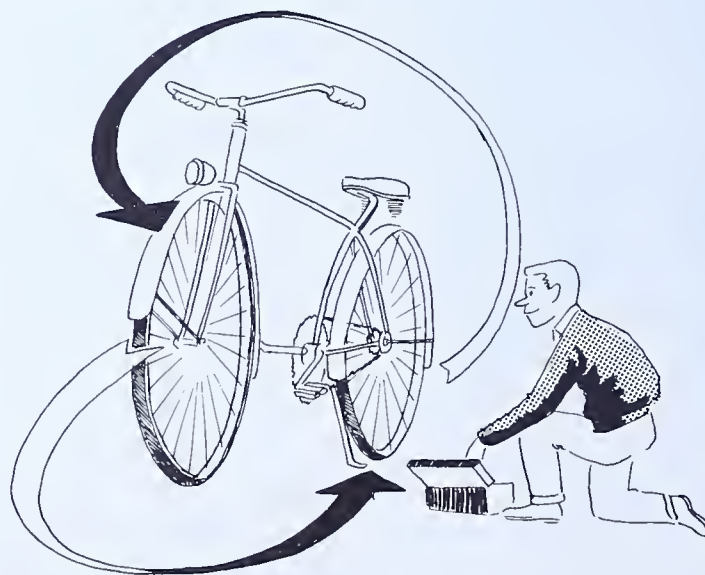
A. Know Your Bicycle

In order to keep a bicycle in safe operating condition, it is necessary for the rider to know the parts of the vehicle and those points which require regular attention. The rider should be familiar with all bicycle parts and their use.

B. Inspection and Repairs

There are many minor repairs which the rider should be taught to do for himself. However, unless the rider has had training in how to service his bicycle, he should take it to his dealer or a competent mechanic for major repairs.

1. The Brake—The brake, whether operated by the hand or the foot, is the main safety device of a bicycle. Check the brake frequently and keep it in good working order.

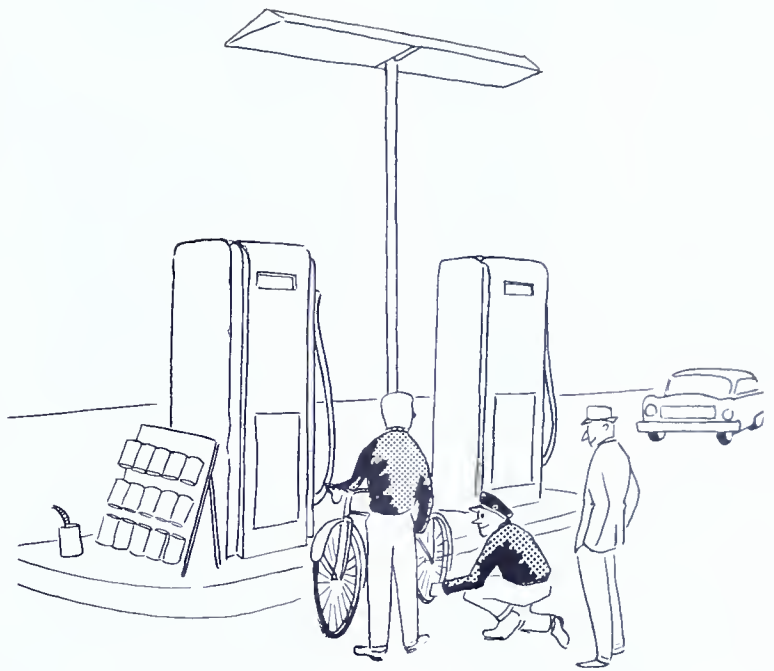


Alternate Your Tires Every 200 Miles

2. **Wheel Bearings**—Lubricate the wheel bearings through hub oil holes with light motor oil. Occasionally clean the bearings by loosening the cones and injecting kerosene until dirt is washed through and out of the wheel; then refill with light oil.
3. **Sprocket Hanger Bearings**—Oil the sprocket hanger bearings by loosening lock nut and cone (they have left-hand threads) and injecting oil. For a thorough cleaning, disassemble by slipping crank through hanger. When re-assembling, tighten cone lightly, leaving just a tiny bit of "play" for easy running.
4. **Pedal Bearings**—Oil the pedal bearings by unscrewing the dust cap on the end and loosening lock nut and cone.
5. **Steering Head Bearings**—Oil the steering head bearings by loosening lock nut and cone at the top of the frame. Oil bearings at bottom of column by dropping fork assembly away from column.
6. **The Chain**—For best results, oil the chain along the sides (to lubricate the centers of the rollers) and rub with dry stick graphite on the outside. If very dirty, remove the chain by locating the master link and bending the chain toward you on both sides of this link until the side bar is released. Soak the chain several hours in kerosene. Then give chain a similar bath in oil and wipe thoroughly before replacing.

To adjust the chain, loosen the rear axle nuts and move the rear wheel and sprocket backward or forward by turning the long, square-headed adjusting bolts in the rear forks. Leave just a little slack in the chain to prevent binding.

7. **Alignment of Wheels**—To align wheels spin them freely and note whether they rub forks or any part of mud guards. If they do, make sure to adjust wheels properly in frame. If they continue to rub, the wheel is not true. This can be corrected by tightening every other spoke that goes to the hub on the side away from the one that rubs, until the wheel is true. A special nipple wrench should be used to make sure all spokes are tight.



Always Keep Tires Inflated to Pressure Indicated

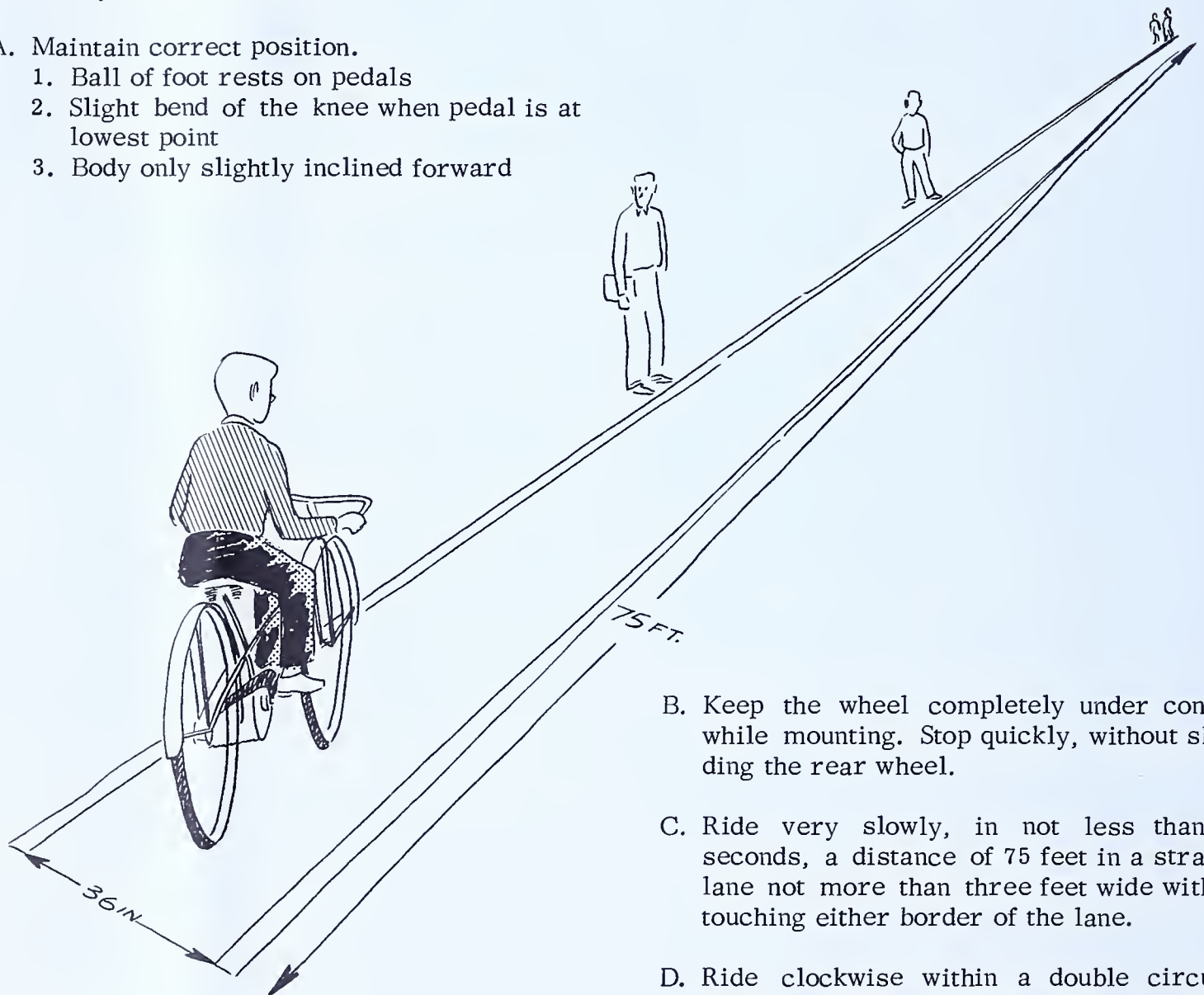
8. **Tires**—The tires are an important factor in the operation of the bicycle. To take the utmost care in their maintenance and to insure the maximum of service and wear:
 - a. Always keep the tires inflated to the pressure indicated on the sidewalls, and check them at least once a week.
 - b. Never jump curbs with a bicycle; such a practice is apt to rupture the fabric of the tires.
 - c. Keep the wheels properly aligned to prevent rubbing of the tire sidewalls on the forks or mud guards.
 - d. Learn the proper technique to mount or dismount the particular type of tire which your bike uses. Never use a tool of any kind to mount or dismount wire bead tires. Tools may break or injure the beads.
 - e. Keep the tires clean. Oil or tar will rot rubber.
 - f. Check the tires frequently for cuts, imbedded glass, pebbles, or metal.
 - g. Alternate your tires wheel for wheel every 200 miles; the rear tire gets more wear than the front wheel.
 - h. Own a tire repair kit; keep it clean, cool, and dry. Follow its instructions.

UNIT V: Development of Skills in Bicycle Riding

The first essential in assuring the safe operation of a bicycle is to develop the necessary skills in riding. The learning process should take place in a safe area—never on city streets or highways. The rider should have mastered completely the following skills in riding before attempting to ride in traffic where lack of control may cost him his life:

A. Maintain correct position.

1. Ball of foot rests on pedals
2. Slight bend of the knee when pedal is at lowest point
3. Body only slightly inclined forward



Test Your Skill

- B. Keep the wheel completely under control while mounting. Stop quickly, without skidding the rear wheel.
- C. Ride very slowly, in not less than 30 seconds, a distance of 75 feet in a straight lane not more than three feet wide without touching either border of the lane.
- D. Ride clockwise within a double circular lane, the circles four feet apart and the inside circle 20 feet in diameter, without touching either circular border and using only the left hand to steer.
- E. Ride twice around the same circle counter-clockwise without touching either border and using only the right hand to steer.

UNIT VI: Traffic Regulations Governing Bicycles

In *Unit One*, it was pointed out that four out of five bicyclists involved in serious accidents with motor vehicles were violating a law or regulation. This indicates that these cyclists either do not *know* the laws or they do not *respect* them.

It is the duty of safety officials, therefore, to bring to the cyclist's attention the regulations and safety precepts which all bicycle riders should respect.

Such regulations are divided into state laws and local ordinances.

PENNSYLVANIA VEHICLE CODE PROVISIONS GOVERNING BICYCLES AND BICYCLES WITH MOTORS ATTACHED

Bicycle

Section 1024, page 171—Hanging on to vehicle prohibited

Section 801, page 95—Lamp and reflector required

Section 102, page 15—Within definition of a vehicle for traffic rules

Bicycle with Motor Attached

Section 816, page 110—Brakes, number required

Section 102, page 10—Defined as motorcycle

Section 801, page 95—Lamp and reflector required

Section 506, page 52—Registration plates defaced, unlawful

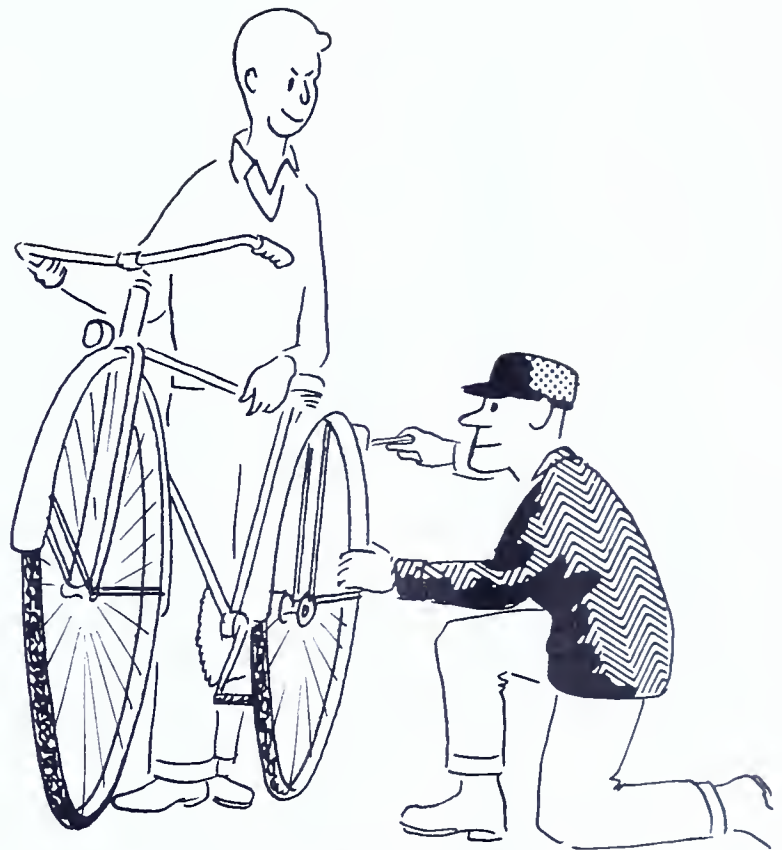
Section 501, page 47—Registration plates required

Model Traffic Ordinance

Article XII—Regulations for bicycles

Section 12-1—Effect of regulations

(a) It is a misdemeanor for any person to do any act forbidden or fail to perform any act required in this article.



Lamps and Reflectors Are Required

(b) The parent of any child and the guardian of any ward shall not authorize or knowingly permit any such child or ward to violate any of the provisions of this ordinance.

(c) These regulations applicable to bicycles shall apply whenever a bicycle is operated upon any highway or upon any path set aside for the exclusive use of bicycles subject to those exceptions stated herein.

Section 12-2—License required

No person, who resides within this city, shall ride or propel a bicycle on any street or upon any public path set aside for the exclusive use of bicycles unless such bicycle has been licensed and a license plate is attached thereto as provided herein.

Section 12-3—License application

Application for a bicycle license and license plate shall be made upon a form provided by the city and shall be made to the (chief of police). An annual license fee of (\$00.00) shall be paid to the city before each license or renewal thereof is granted.



Points Requiring Regular Attention for Safe Operation

Section 12-4—Issuance of license

(a) The (chief of police) upon receiving proper application therefor is authorized to issue a bicycle license which shall be effective until (the next succeeding first day of July).

(b) The (chief of police) shall not issue a license for any bicycle when he knows or has reasonable ground to believe that the applicant is not the owner of or entitled to the possession of such bicycle.

(c) The (chief of police) shall keep a record of the number of each license, the date issued, the name and address of the person to whom issued, and the number on the frame of the bicycle for which issued, and a record of all bicycle license fees collected by him.

Section 12-5—Attachment of license plate

(a) The (chief of police) upon issuing a bicycle license shall also issue a license plate bearing the license number assigned to the bicycle, the name of the city, and (the calendar year for which issued) and (the expiration date thereof).

(b) The (chief of police) shall cause such license plate to be firmly attached to the rear mudguard or frame of the bicycle for which issued in such position as to be plainly visible from the rear.

(c) No person shall remove a license plate from a bicycle during the period for which issued except upon a transfer of ownership or in the event the bicycle is dismantled and no longer operated upon any street in this city.

Section 12-6—Inspection of bicycles

The chief of police, or an officer assigned such responsibility, shall inspect each bicycle before licensing the same and shall refuse a license for any bicycle which he determines is in unsafe mechanical condition.

Section 12-7—Renewal of license

Upon the expiration of any bicycle license the same may be renewed upon application and payment of the same fee as upon an original application.

Section 12-8—Transfer of ownership

Upon the sale or other transfer of a licensed bicycle the licensee shall remove the license plate and shall either surrender the same to the (chief of police) or may upon proper application but without payment of additional fee have said plate assigned to another bicycle owned by the applicant.

Section 12-9—Rental agencies

A rental agency shall not rent or offer any bicycle for rent unless the bicycle is licensed and a license plate is attached thereto as provided herein and such bicycle is equipped with the lamps and other equipment required in this article.

Section 12-10—Bicycle dealers

Every person engaged in the business of buying or sale of new or second-hand bicycles shall make a report to the (chief of police) of every bicycle purchased or sold by such dealer, giving the name and address of the person from whom

purchased or to whom sold, a description of such bicycle by name or make, the frame number thereof, and the number of license plate, if any found thereon.

Section 12-11—Traffic laws apply to persons riding bicycles

Every person riding a bicycle upon a roadway shall be granted all of the rights and shall be subject to all of the duties applicable to the driver of a vehicle by the laws of this State declaring rules of the road applicable to vehicles or by the traffic ordinances of this city applicable to the driver of a vehicle, except as to special regulations in this article and except as to those provisions of law and ordinances which by their nature can have no application.

Section 12-12—Obedience to traffic-control devices

(a) Any person operating a bicycle shall obey the instructions of official traffic-control signals, signs, and other control devices applicable to vehicles, unless otherwise directed by a police officer.

(b) Whenever authorized signs are erected indicating that no right or left or "U" turn is permitted, no person operating a bicycle shall disobey the direction of any such sign, except where such person dismounts from the bicycle to make any such turn, in which event such person shall then obey the regulations applicable to pedestrians.

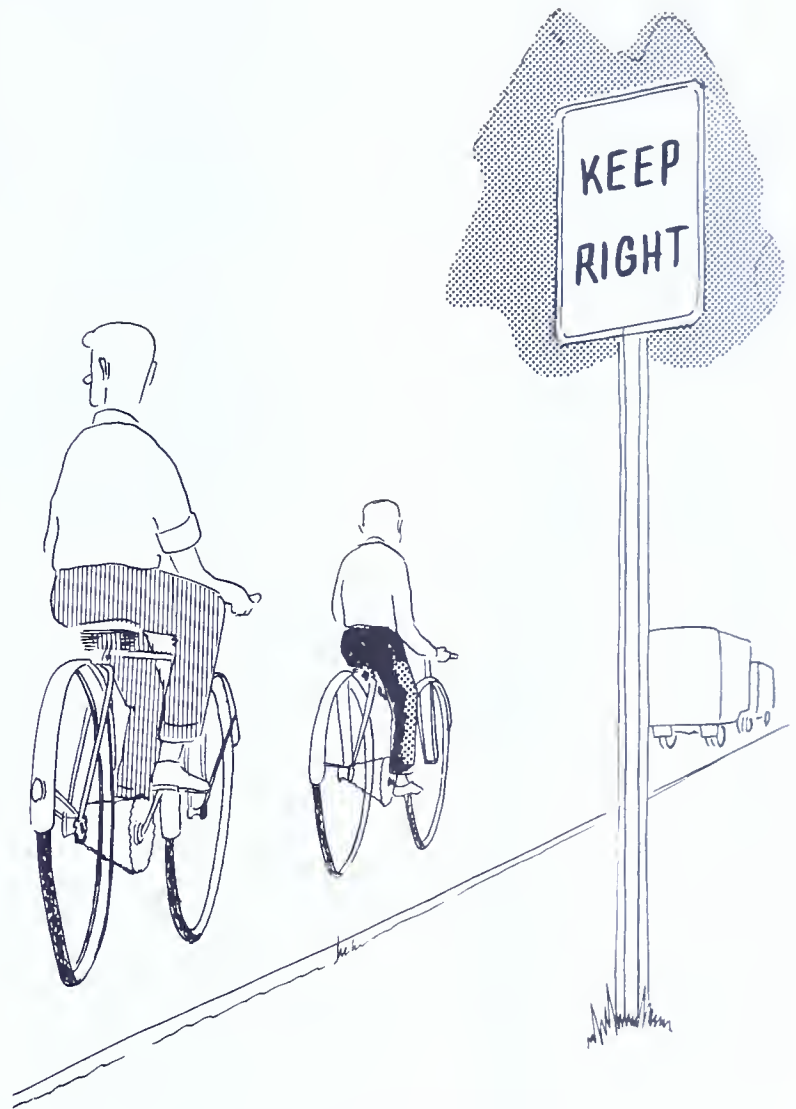
Section 12-13—Riding on bicycles

(a) A person propelling a bicycle shall not ride other than astride a permanent and regular seat attached thereto.

(b) No bicycle shall be used to carry more persons at one time than the number for which it is designed and equipped.

Section 12-14—Riding on roadways and bicycle paths

(a) Every person operating a bicycle upon a roadway shall ride as near to the right side of



Ride It Right—Keep to the Right

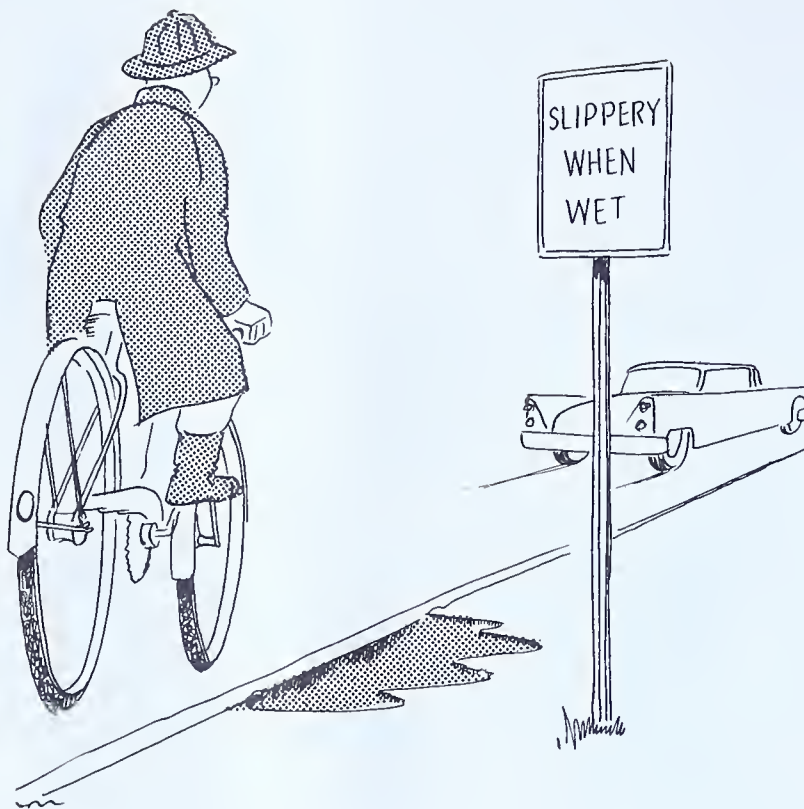
the roadway as practicable, exercising due care when passing a standing vehicle or one proceeding in the same direction.

(b) Persons riding bicycles upon a roadway shall not ride more than two abreast except on paths or parts of roadways set aside for the exclusive use of bicycles.

(c) Wherever a usable path for bicycles has been provided adjacent to a roadway bicycle riders shall use such path and shall not use the roadway.

Section 12-15—Speed

No person shall operate a bicycle at a speed greater than is reasonable and prudent under the conditions then existing.



Special Precautions

Section 12-16—Emerging from alley or driveway

The operator of a bicycle emerging from an alley, driveway, or building shall upon approaching a sidewalk or the sidewalk area extending across any alleyway, yield the right of way to all pedestrians approaching on said sidewalk or sidewalk area, and upon entering the roadway shall yield the right of way to all vehicles approaching on said roadway.

Section 12-17—Carrying articles

No person operating a bicycle shall carry any package, bundle or article which prevents the rider from keeping at least one hand upon the handlebars.

Section 12-18—Parking

No person shall park a bicycle upon a street other than upon the roadway against the curb or upon the sidewalk in a rack to support the bicycle, or against a building, or at the curb in such manner as to afford the least obstruction to pedestrian traffic.

Section 12-19—Riding on sidewalks

(a) No person shall ride a bicycle upon a sidewalk within a business district.

(b) The (chief of police) is authorized to erect signs on any sidewalk or roadway prohibiting the riding of bicycles thereon by any person and when such signs are in place no person shall disobey the same.

Alternate (b) No person (15) or more years of age shall ride a bicycle upon any sidewalk in any district.

(c) Whenever any person is riding a bicycle upon a sidewalk, such person shall yield the right of way to any pedestrian and shall give audible signal before overtaking and passing such pedestrian.

Section 12-20—Lamps and other equipment on bicycles

(a) Every bicycle when in use at nighttime shall be equipped with a lamp on the front which shall emit a white light visible from a distance of at least 500 feet to the front and with a red reflector on the rear of a type which shall be visible from all distances from 50 feet to 300 feet to the rear when directly in front of lawful upper beams of headlamps on a motor vehicle. A lamp emitting a red light visible from a distance of 500 feet to the rear may be used in addition to the red reflector.

(b) No person shall operate a bicycle unless it is equipped with a bell or other device capable of giving a signal audible for a distance of at least 100 feet, except that a bicycle shall not be equipped with nor shall any person use upon a bicycle any siren or whistle.

(c) Every bicycle shall be equipped with a brake which will enable the operator to make the braked wheel skid on dry, level, clean pavement.

Section 12-21—Penalties

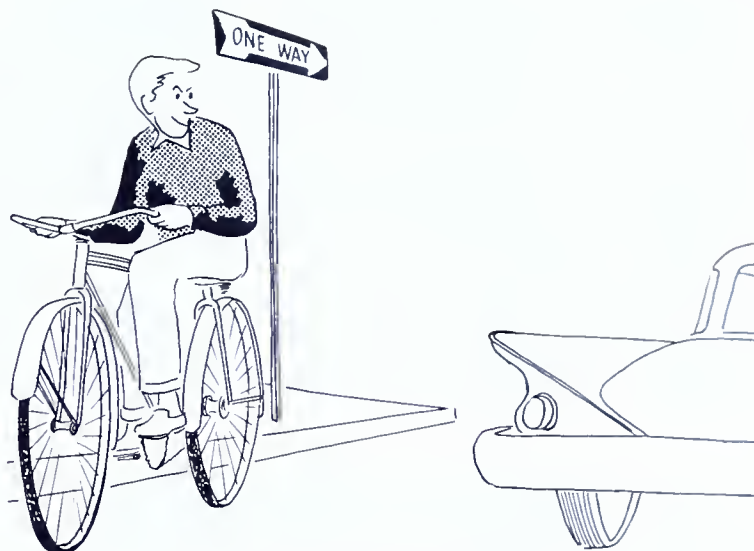
Every person convicted of a violation of any provision of this article shall be punished by a fine of not more than () dollars or by imprisonment for not more than () days or by

removal and detention of the license plate from such person's bicycle for a period not to exceed () days or by impounding of such person's bicycle for a period not to exceed () days or any combination thereof.

THE BICYCLE SAFETY CODE

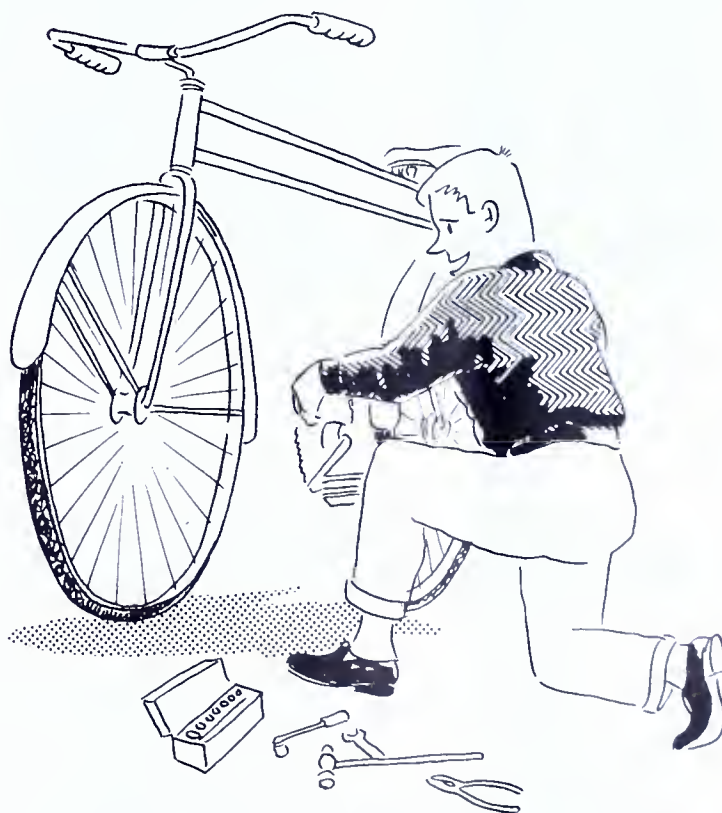
In addition to knowing and obeying the traffic laws, the cyclist should know and heed certain common sense rules of courtesy and safety as defined in the following Bicycle Safety Code.

1. Obey all traffic rules of the road.
2. Ride in single file.
3. Keep out of street car tracks and ruts.
4. Refrain from stunt riding, racing, and zig-zagging in traffic.
5. Refuse to carry passengers or allow others to hitch onto your vehicle.
6. Make repairs off the roadway.
7. Use hand signals to indicate intention to turn, slow down, or stop.
8. Dismount and walk when crossing where traffic volume is heavy.
9. Refrain from hitching rides.
10. Learn to ride in a place away from traffic.
11. Maintain vehicle in safe operating condition. Have it checked or overhauled once a year by a serviceman.
12. Avoid all slippery street surfaces.
13. For the greatest safety, ride during daylight hours only. Be sure lights and reflectors work, and wear light-colored clothing for night riding.
14. Slow down, look, and listen at all intersections and driveways.
15. Remember all expert riders are safe riders.



The Safe Way Is To Follow Traffic Signs

16. Use guards to avoid catching your clothing in unguarded sprockets and chains.
17. Park your bicycle off the highway where it will not interfere with motorists or pedestrians.
18. Carry bundles in carriers or racks.
19. Keep both hands on the handlebars.
20. Avoid riding long distances on hot days and right after meals.



Have Major Repairs Made at an Authorized Repair Shop

MUNICIPAL REGULATIONS, REGISTRATION AND LICENSING

A number of Pennsylvania communities have already adopted ordinances and have developed inspection and licensing programs. Without proper enforcement, the bicycle ordinance will fail in its purpose of reducing bicycle accidents. Such enforcement demands the cooperation of parents, school officials, city officials, and police.

Bicycle Inspection and Licensing Materials
Used by the Borough of Norristown



Operator's License Number

1000

Nº

(Side 1)

THE BOROUGH OF NORRISTOWN — Bicycle Operator's License
This certifies that the addressee has been named as an operator of a bicycle. This license shall expire May 31, 1962, unless revoked or suspended for cause by the Police Department at an earlier date.
OPERATOR
SIGN HERE.....

Make.....Serial No.....

This license must be carried when operating bicycle and is not transferable. Not valid unless signed in ink by addressee.

OSCAR T. RAHN,
Boro Treas.

BICYCLE VIOLATION

Nº 388

OWNER
ADDRESS
LIC. NO.
MAKE
SERIAL NO.
COLOR
IMPOUNDED AT
DATE IMPOUNDED
VIOLATION
TO BE RELEASED
OFFICER

BICYCLE VIOLATION

Nº 388

OWNER
ADDRESS
LIC. NO.
MAKE
SERIAL NO.
COLOR
IMPOUNDED AT
DATE IMPOUNDED
VIOLATION
TO BE RELEASED
OFFICER

The bicycle is a vehicle, and the rules of safe driving are:

To obey all traffic regulations such as Red and Green Lights, one way streets, stop signs and hand signals.

To ride in a straight line.

To have a white light on front and danger signal on rear for night-riding.

To have satisfactory signaling device to warn of approach.

To give pedestrians the right-of-way.

To look out for cars at crossings and pulling out of parking places and in the opening of Auto Doors on Traffic side.

Not to hitch on vehicles.

Not to carry another person on my bicycle.

To keep my bicycle in good condition.

SLOGAN. — Be Careful At All Times

COMMITTEE OF PUBLIC SAFETY,
Norristown, Pa.

(Side 2)

NORRISTOWN POLICE

BICYCLE LAWS

For Your Safety — Read Carefully the Following Rules and Regulations

The Law requires all bicycle operators to—

1. Equip bicycle with a lamp on the front (if used at night), and a red reflector on the rear.
2. Equip bicycle with horn or bell.
3. Obey all traffic signals, stop signs, etc.
4. Use proper hand signals to indicate turning and stopping.
5. Ride on right side of highway.
6. Have license card in his or her immediate possession at all times when operating bicycle.
7. Keep bicycle in safe operating condition.

The Law forbids a bicycle rider to—

1. Hitch or hold fast to the outside or rear of any other vehicle.
2. Carry an extra passenger on the handlebars or any other part of bicycle.
3. Engage in any trick, zig-zag or fancy riding on the highway.
4. Ride on sidewalks.

Penalties—

- A—Impounding of bicycle for 7 days, first violation.
Impounding of bicycle for 14 days, second violation.
Impounding of bicycle for 30 days, third violation.
B—Removal and detention of license plate from bicycle.
C—By a fine of not more than \$10.00.

**ALL THE ABOVE RULES AND REGULATIONS
WILL BE STRICTLY ENFORCED.**

ROBERT BAXTER, Chief of Police
FRANK CIACCIO, Safety Officer

UNIT VII: School Activities Promoting Bicycle Education

Whether bicycle safety is taught through clubs or regular classroom instruction, the school can cooperate in making such instruction more effective by offering or encouraging the students to engage in various projects or activities, such as:

1. *Assembly Programs* —Use speakers, movies, plays, and music dealing with bicycle safety.

2. *Parking Facilities and Ground Regulations*—Include the selection and marking of the parking area and direction of traffic, and installation of parking racks with spaces assigned to pupils riding bikes to school. Shelters are desirable for protection of bikes against rain and snow.

3. *Bicycle Courts* —Bicycle courts provide for hearing and action on cases of violations of local or state regulations, conducted by pupils with faculty assistance.

4. *Bicycle Student Patrols*—With faculty assistance, these patrols can help to enforce local bicycle rules and regulations as set up by local school districts for parking and riding a bicycle on schoolgrounds.

5. *Accident Analysis*—Utilize accident spot maps to locate local accident scenes. Discuss the causes of the accidents. Study the motor vehicle involved in bicycle accidents—its condition, the age, sex and experience of its driver, his traffic behavior, etc.

6. *Safety Surveys* —Collect information on the number of pupils with bicycles, the condition of the bicycles, safe and unsafe bicycle practices, witnesses, and data on accidents in which students were involved.

7. *Field Days and Tours*—Emphasize safe, skilled riding, including parades, bike polo games, hikes, etc.

8. *Pennsylvania Vehicle Code*—Refer to Unit VI and make a study of the regulations applying to bicycles; also make a complete study of Article X relating to the rules of the road.

9. *Bicycle Safety Code*—Develop your own safety code similar to the one in Unit VI, page 21.

10. *Knowledge Test*—Develop a quiz appropriate to grade level to appraise pupils' knowledge and understanding of traffic laws, safety principles, and bicycle maintenance covering the seven units outlined.

BICYCLE SAFETY CHECKLIST

Provision should be made by the school for adequate facilities and instruction in bicycling to aid in achieving the general purpose of Highway Safety Education.

YES NO

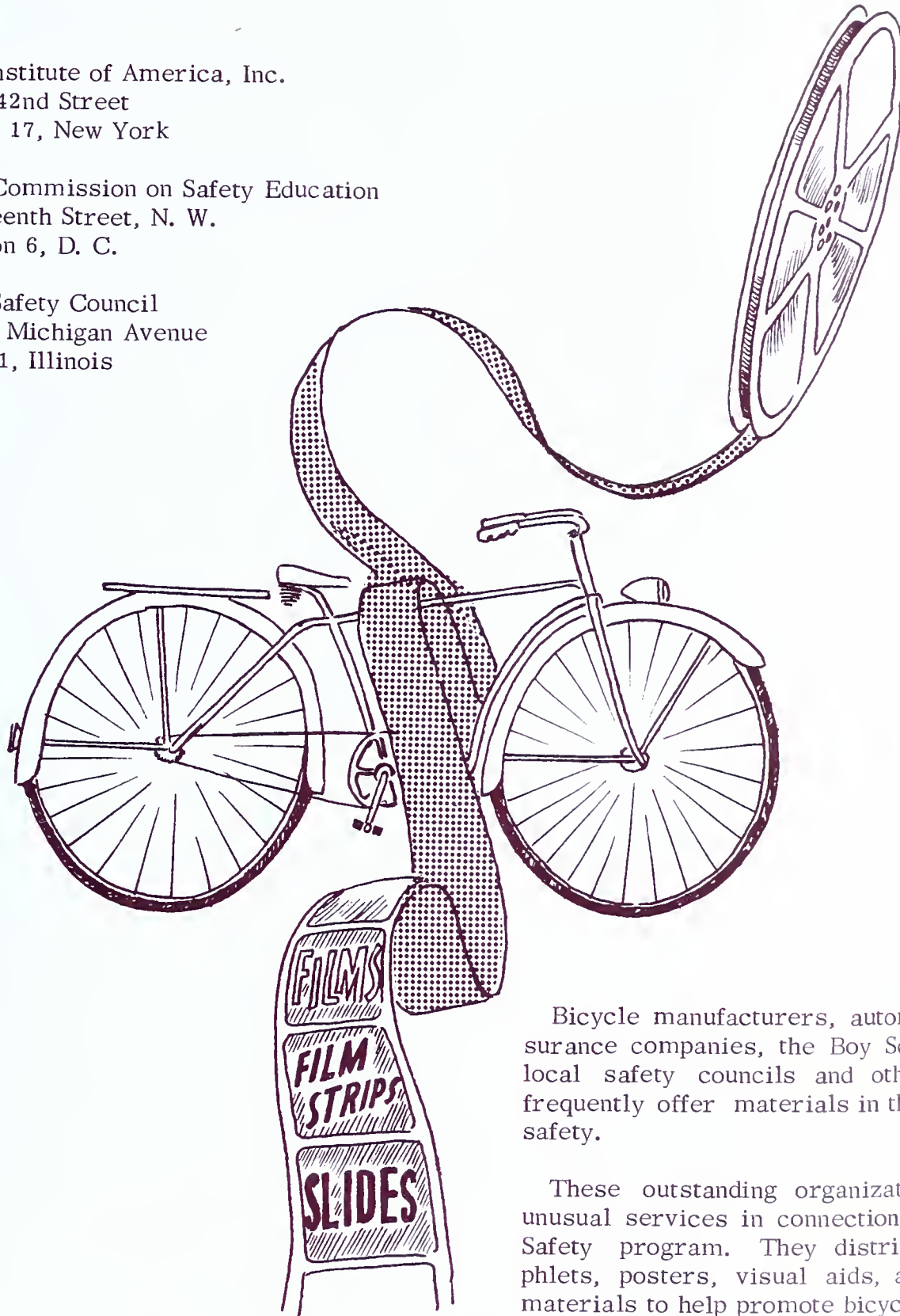
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|-----|-----|--|
| ___ | ___ | 1. One person in each building is in supervisory charge of all bicycle safety in the school. |
| ___ | ___ | 2. Special parking racks in regulated parking areas or special rooms are provided for the housing of the bicycles. |
| ___ | ___ | 3. Patrols are appointed to cooperate with faculty members to enforce local bicycle ground rules. |
| ___ | ___ | 4. Programs on bicycle accidents are held in which accident spot maps are utilized to locate local accident scenes and their causes. |
| ___ | ___ | 5. The school administers a skill test for all bicycle riders. |
| ___ | ___ | 6. Bicycle safety surveys are conducted, including information on the number of pupils with bicycles and the condition of these bicycles. |
| ___ | ___ | 7. Field days are held emphasizing safe riding in parades, bike polo games, and exhibitions of skill. |
| ___ | ___ | 8. Assembly programs are conducted which utilize speakers, movies, radio plays, and music dealing with bicycle safety. |
| ___ | ___ | 9. Planned bicycle hikes and tours are held with an adult adviser in charge. |
| ___ | ___ | 10. Students, faculty, and police compose a functioning bicycle court which deals with cases of violation on the part of the bicyclist involved in violations of local or state regulations. |
| ___ | ___ | 11. There is cooperation with all municipal activities, local police, and other agencies interested in bicycle safety. |
| ___ | ___ | 12. There is a Bicycle Club in the school. |
| ___ | ___ | 13. The school provides for inspection of bicycles for safety. |
| ___ | ___ | 14. Bicycle instruction is integrated with other subjects taught in the school. |
| ___ | ___ | 15. The school has adopted a Bicycle Safety Code. |
| ___ | ___ | 16. A scrapbook and a library shelf on bicycle information are in the school library. |
| ___ | ___ | 17. Bicycle licensing is recommended by the school. |
| ___ | ___ | 18. The fundamentals of bicycle instruction are taught in the elementary grades prior to the time a pupil can operate a bicycle. |

BIBLIOGRAPHY

Bicycle Institute of America, Inc.
122 East 42nd Street
New York 17, New York

National Commission on Safety Education
1201 Sixteenth Street, N. W.
Washington 6, D. C.

National Safety Council
425 North Michigan Avenue
Chicago 11, Illinois



Bicycle manufacturers, automobile clubs, insurance companies, the Boy Scouts of America, local safety councils and other organizations frequently offer materials in the area of bicycle safety.

These outstanding organizations offer many unusual services in connection with the Bicycle Safety program. They distribute many pamphlets, posters, visual aids, and other printed materials to help promote bicycle safety.

Teachers and students are encouraged to develop original bicycle safety materials such as posters, codes of behavior, spot maps, flyers and models.

ACKNOWLEDGMENTS

The Department of Public Instruction has had the helpful cooperation of public school teachers, supervisors of safety education and school administrators in the development of this bulletin.

Special appreciation is extended to these individuals for their assistance in the preparation of the bulletin.

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Director

Public Relations and Safety

Department

Automobile Club of

Philadelphia

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Other Traffic Safety Education Bulletins are:

Bulletin 395—*A Guide to Driver Education and Highway Safety*

Bulletin 396—*Handbook for the School Bus Driver*

Bulletin 397—*Safety Education in the Elementary School*